

**REMARKS**

Claims 1-59 are pending and stand ready for further action on the merits. On the Office Action Summary Form (PTO-326 form), the Examiner indicates that claims 9-34, 44-48 and 50-59 are allowed and that claims 2-5, 35, 36, 38-43 and 49 have been objected to.

Claim 1 has been amended to indicate that the surface roughness of the crystalline silicon layers 0.05 nm to 2 nm. This range combines the range of "2 nm or less" as disclosed on page 41, lines 2-3 of the present specification with the lower limit of "0.05" nm as described in original claim 1. Claims 8, 17, 20, 36-43 and 49 have been amended for clarity.

No new matter has been added by way of the above-amendment. The above-amendment has not been made for the sake of patentability and/or does not narrow the scope of the present invention.

**Specification**

The Examiner objects to the language of the Abstract. Specifically, the Examiner objects to the fact that the Abstract refers to "the present invention."

In response, Applicants have amended the Abstract to no longer recite this phrase. As such, Applicants respectfully request that the objection be withdrawn.

**Drawings**

The Examiner objects to the specification for not describing elements 1 and 9-19 of Figure 4 and elements 1 and 20-22 of Figure 7. In response, Applicants have added reference numbers 1, 10, 15, 17 and 19-22 to the specification at pages 48 and 49. Also, Applicants have deleted reference numbers 9, 11, 12, 13, 14, 16 and 18 from Figure 4. Applicants enclose herewith a proposed amended Figure 4.

The Examiner is respectfully requested to indicate whether Figure 4 (as attached), along with the other Figures are acceptable.

**Claim Objections**

The Examiner objects to claims 35-36 for failing to further limit the subject matter of the previous claim.

With respect to claim 35, the Examiner appears to be objecting to the fact that the product of claim 35 is made by the process claim 9. In response, Applicants respectfully bring to the Examiner's attention that MPEP 608.01(n)(III) authorizes this claim construction as follows:

The fact that the independent and dependent claims are in different statutory classes does not, in itself, render the latter improper. Thus, if claim 1 recites a specific product, a claim for the method of making the product of claim 1 in a particular manner would be a

proper dependent claim since it could not be infringed without infringing claim 1.

Accordingly, Applicant respectfully submits that no further amendment to claim 35 is required.

With respect to claim 36, Applicants have amended claim 36 to recite the subject matter of claim 1. Currently claim 36 solely depends upon claim 9.

The Examiner objects to claims 38-43 and 49 for being improper multiple dependent claim form. In response, Applicants have amended claims 38-43 and 49 to depend solely from a single claim each. In view of the above amendments and comments, Applicants respectfully request that the objection to the claims be withdrawn.

**Issues Under 35 U.S.C. §112, second paragraph**

Claims 1 and 37 are rejected under 35 U.S.C. §112, second paragraph for being indefinite. Applicants respectfully traverse the rejection.

With regard to claim 1, the Examiner finds it confusing that the semiconductor substrate can comprise an insulating underlay thereon and the insulating underlay is also the substrate itself.

In response, Applicants have amended claim 1 by replacing the phrase "said insulating underlay is a semiconductor substrate comprising a single crystal oxide substrate..." with "said insulating underlay comprising a single crystal oxide substrate...".

With regard to claim 37, the Examiner finds it confusing that the semiconductor device uses a semiconductor substrate as a substrate. In response, Applicants have amended claim 37 to recite:

"A semiconductor device comprising the semiconductor substrate as claimed in claim 1 for improved device characteristics."

The Examiner objects to claim 8 for reciting "said laminated substrate" in lines 3-4. The Examiner finds that there is insufficient antecedent basis for this phrase in the preceding claim. In response, Applicants have amended claim 8 by replacing the phrase "wherein said insulating underlay is said laminated substrate, said crystalline oxide layer stacked on silicon substrate as said substrate comprises" with "wherein said insulating underlay is a laminated substrate, and wherein said crystalline oxide layer stacked on silicon substrate comprises".

In view of the above amendments and comments, Applicants respectfully submit that the claims particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Accordingly, withdrawal of the rejection is respectfully requested.

#### Double Patenting

The Examiner objects to claims 1 and 6-8 under 35 U.S.C. §101

as claiming the same invention as that of claims 1 and 8-10 of U.S. Patent No. 6,528,387 (U.S. '387). Applicants respectfully traverse the rejection.

At section 804, the MPEP instructs that where the claims of an application are substantively the same as those of a first patent, they are barred under 35 USC 101 - the statutory basis for a double patenting rejection. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 USC 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ...." Thus, the term "same invention," in this context, means an invention drawn to **identical** subject matter.

In determining whether a statutory basis for a double patenting rejection exists, the question to be asked is: Is the same invention being claimed twice? A reliable test for double patenting under 35 USC 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent. Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist. For example, the invention defined by a claim reciting a compound having a "halogen" substituent is not identical to or substantively the same as a claim reciting the same compound except having a "chlorine" substituent in place of

the halogen because "halogen" is broader than "chlorine." See MPEP 804.

In the present case, the exact invention is not claimed in U.S. '387 as is claimed in inventive claims 1 and 6-8, since inventive claim 1 recites a surface roughness of said crystalline silicon layer of 0.05nm to 0.2nm whereas the crystalline silicon layer has a surface roughness in claim 1 of U.S. '387 of 0.05nm to 4nm. Also, inventive claim 1 recites that the number of pits per unit area formed by immersing an iodine-type etching solution is  $7 \times 10^6/\text{cm}^2$  or less over an entire depth direction whereas in claim 1 of U.S. '387, the defect density is 4 times  $10^8/\text{cm}^2$  or less.

Accordingly, the exact invention is not claimed in U.S. '387 as is claimed in inventive claims 1 and 6-8 and as such, a rejection under 35 U.S.C. §101 is not proper. Withdrawal of the rejection is respectfully requested.

**Priority Documents**

Applicants note from the outstanding Office Action that the Examiner has not acknowledged receipt of the inventive priority document JP 10-272126. Since the present application is a §371 of PCT/JP99/05231, the PCT receiving office is required to forward a certified copy to the United States Patent and Trademark Office. The Examiner is respectfully requested to acknowledge whether the PCT Receiving Office has forwarded certified copies in accordance with PCT Rule 17.2(a).

Conclusion

In view of the above amendments and comments, Applicants respectfully submit that the claims are in condition for allowance. A notice to such effect is earnestly solicited.

If the Examiner has any questions concerning this application, he is requested to contact Garth M. Dahlen, Ph.D. (#43,575) at the offices of Birch, Stewart, Kolasch & Birch, LLP.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By

 #43575

Raymond C. Stewart  
Reg. No. 21,066



RCS/GMD/gh

P. O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000

Enclosed: 1) Abstract of the Disclosure  
2) Figure 4